UNITED STATES PATENT AND TRADEMARK OFFICE

Examiner: Group: Attorney Docket # 2015

Applicant(s) : BLASCO REMACHA, C.

Serial No. :

Filed :

For : ELECTRONICALLY COMMUTATED ELECTRICAL MACHINE, IN PARTICULAR MOTOR

SIMULTANEOUS AMENDMENT

March 1, 2002

Honorable Commissioner of Patents and Trademarks
Washington, D.C. 20231

S I R S:

Simultaneously with filing of the above identified application please amend the same as follows:

In the Claims:

Cancel all claims without prejudice.

Substitute the claims attached hereto.

REMARKS:

This Amendment is submitted simultaneously with filing of the above identified application.

With the present Amendment applicant has amended the claims so as to eliminate their multiple dependency.

Consideration and allowance of the present application is most respectfully requested.

Respectfully submitted,

Michael J. Striker
Attorney for Applicant(s)
Reg. No. 27233

Claims

1. An electronically commutated electrical machine, in particular motor, having a stator (30) that has primary teeth (34) partitioned off by slots (33), and having a stator winding (37), produced of insulated winding wire (38), that has k winding phases (41-44), each with l parallel branches (45) each of m series-connected coils (40), placed in the slots (33) and wound around the primary teeth (34), as well as contact hooks (39) connected to the l parallel branches (45) of each winding phase (41-44), which contact hooks form phase terminals (B1, B2, A2, A1) and star points (SB, SA) of each winding phase (41-44), where k, l and m are integers greater than 1, characterized in that some of the l parallel branches (45), belonging to one winding phase (41-44), are contacted to the star point (SB, SA) of another winding phase (44-41).

2. The machine of claim 1, characterized in that the contact hooks (39), forming the phase terminals (B1, B2, A2, A1) and star points (SB, SA) of the winding phases (41-44), are disposed on the inner edge of the annular stator (30), on the same side of the stator (30), and the wire segments connecting the individual coils (40) are laid along the inner edge of the annular stator (30).

3. The machine of claim 1 [or 2], characterized in that the winding wire (38), depending on the location of the next coil (40) in the stator (30), is either suspended with α loops from the contact hooks (39) or is laid along and in contact with the contact hooks (39), and that all the winding wire segments located at the contact hooks (39) are connected electrically and

mechanically to the contact hooks (39).

4. The machine of [one of claims 1-3] claim 1, characterized in that in a four-phase version of the stator winding (37), two winding phases (41, 42), or (43, 44) of the stator winding (37), whose coils (40) are wound onto the same primary teeth (34), are each contacted at a common star point (SB, SA), and that when there are four parallel branches (45) per winding phase (41-44), two branches per winding phase (41, 44) are carried to the common star point (SB, SA) belonging to the winding phase (41-44), and two branches per winding phase (41-44) are carried to the other star point (SA, SB) and contacted respectively at the star points (SA, SB).

5. The machine of [one of claims 1-4] claim 1, characterized in that the star points (SA, SB) are connected to one another externally.

Claims

1. An electronically commutated electrical machine, in particular motor, having a stator (30) that has primary teeth (34) partitioned off by slots (33), and having a stator winding (37), produced of insulated winding wire (38), that has k winding phases (41-44), each with l parallel branches (45) each of m series-connected coils (40), placed in the slots (33) and wound around the primary teeth (34), as well as contact hooks (39) connected to the l parallel branches (45) of each winding phase (41-44), which contact hooks form phase terminals (B1, B2, A2, A1) and star points (SB, SA) of each winding phase (41-44), where k, l and m are integers greater than 1, characterized in that some of the l parallel branches (45), belonging to one winding phase (41-44), are contacted to the star point (SB, SA) of another winding phase (44-41).

2. The machine of claim 1, characterized in that the contact hooks (39), forming the phase terminals (B1, B2, A2, A1) and star points (SB, SA) of the winding phases (41-44), are disposed on the inner edge of the annular stator (30), on the same side of the stator (30), and the wire segments connecting the individual coils (40) are laid along the inner edge of the annular stator (30).

3. The machine of claim 1, characterized in that the winding wire (38), depending on the location of the next coil (40) in the stator (30), is either suspended with α loops from the contact hooks (39) or is laid along and in contact with the contact hooks (39), and that all the winding wire segments located at the contact hooks (39) are connected electrically and

mechanically to the contact hooks (39).

4. The machine of claim 1, characterized in that in a four-phase version of the stator winding (37), two winding phases (41, 42), or (43, 44) of the stator winding (37), whose coils (40) are wound onto the same primary teeth (34), are each contacted at a common star point (SB, SA), and that when there are four parallel branches (45) per winding phase (41-44), two branches per winding phase (41, 44) are carried to the common star point (SB, SA) belonging to the winding phase (41-44), and two branches per winding phase (41-44) are carried to the other star point (SA, SB) and contacted respectively at the star points (SA, SB).

5. The machine of claim 1, characterized in that the star points (SA, SB) are connected to one another externally.